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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,797	01/14/2004	Akhil Jiten Madhani	54317-025101	5437

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EXAMINER

RADA, ALEX P

ART UNIT PAPER NUMBER

3712

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/757,797

Applicant(s)

MADHANI ET AL.

Examiner

Alex P. Rada

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 1-28 and 39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-33, 35, 36 and 38 is/are rejected.
- 7) ☒ Claim(s) 34 and 37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/21/06, 3/6/06.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a flow chart of method claims 29-38 and the elements of claims 29-38 (e.g. determining a reference line, translating the velocity into a distance to mover, the velocity of the wheels is controlled by the distance the joystick is moved from its center position, the joystick etc.) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 29-38 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29 recites the limitation "the velocity" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 30 recites the limitation "the joystick" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 30 recites the limitation "the wheels" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 33 recites the limitation "the two wheels" in line 2. There is insufficient antecedent basis for this limitation in the claim.

The examiner notes that the insufficient antecedent basis noted above are just a few examples and similar insufficient antecedent basis also applies to claims 34-37.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 29-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Morgrey (US 5,158,493).

6. Morgrey discloses the following:

Determining a reference line, in which the examiner interprets the direction of the remote control toggle switch (62) either forward or backward to be an equivalent to determining a reference line, receiving a command from an input device (60), the command representing a velocity to move the walking figure (col. 3, lines 61-68), translating the velocity into a distance to move (col. 16, lines 7-46 and figure 6), moving a first leg a specified distance with respect to the reference line, and moving the second leg once the first leg is planted on the ground (col. 14, lines 44-61 and summary) as recited in claim 29.

The joystick directly controls the velocity of the wheels (col. 3, lines 61-68) as recited in claim 30.

The velocity of the wheels is controlled by the distance the joystick is moved from its center position, in which the examiner interprets the remote controller in the forward position to enable the robot to walk at any desired speed dependent solely upon the judicious selection of gears to be an equivalent to the velocity of the wheels is controlled by the distance the joystick is moved from its center position (col. 3, lines 61-68) as recited in claim 31.

7. Claim 29 is rejected under 35 U.S.C. 102(b) as being anticipated by Osada (US 6,317,652).

8. Osada discloses the following:

Determining a reference line (step 3 of figure 4), receiving a command from an input device (item 31 of figure 3), the command representing a velocity to move the walking figure (item 35 of figure 3), translating the velocity into a distance to move (item 30 of figure 3), moving a first leg a specified distance with respect to the reference line, and moving the second leg once the first leg is planted on the ground (item 30 of figure 3, figure 4 and summary) as recited in claim 29.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 32-33 and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgrey (US 5,158,493) in view of Furukawa (US 4,717,364).

11. Morgrey discloses the claimed invention as discussed above except for the following:

A movement of the joystick to the forward or reverse controls the wheels to move forward or reverse as recited in claim 32.

A movement of the joystick to the left or right controls rotation of the two wheels as recited in claim 33.

The movement of the joystick to the left results in a counter-clockwise rotation of the two wheels as recited in claim 35.

The movement of the joystick to the right results in a clockwise rotation of the two wheels as recited in claim 36.

Furukawa teaches the following:

A movement of the joystick to the forward or reverse controls the wheels to move forward or reverse (col. 7, lines 31-40) as recited in claim 32.

A movement of the joystick to the left or right controls rotation of the two wheels (col. 7, lines 31-40) as recited in claim 33.

The movement of the joystick to the left results in a counter-clockwise rotation of the two wheels (col. 7, lines 31-40) as recited in claim 35.

The movement of the joystick to the right results in a clockwise rotation of the two wheels (col. 7, lines 31-40) as recited in claim 36. By having a joystick to control different movements of the robot, one of ordinary skill in the art would provide an entertaining and enjoyable robot that can easily be operated by a user.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Morgrey to include a movement of the joystick to the forward or reverse controls the wheels to move forward or reverse, a movement of the joystick to the left or right controls rotation of the two wheels, the movement of the joystick to the left results in a counter-clockwise rotation of the two wheels, and the movement of the joystick to the right results in a clockwise rotation of the two wheels as

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taught by Furukawa to provide an entertaining and enjoyable robot that can easily be operated by a user.

12. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morgrey (US 5,158,493) in view of Furukawa (US 4,717,364) as applied to claim 29 above, and further in view of Takenaka (US 5,404,086).

13. Morgrey in view of Furukawa disclose the claimed invention as discussed above except for the following:

The leg comprises a sensor for determining the force when contacting the ground as recited in claim 38.

Takenaka teaches the following:

The leg comprises a sensor for determining the force when contacting the ground (col. 5, lines 64 – col. 6, line 6) as recited in claim 38. By having a sensor on the leg, one of ordinary skill in the art would detect whether or not the associated foot has landed and the magnitude and direction of the forces and moment of forces acting to the robot through the supporting leg.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Morgrey to further include the leg comprising a sensor for determining the force when contacting the ground as taught by Takenaka to detect whether or not the associated foot has landed and the magnitude and direction of the forces and moment of forces acting to the robot through the supporting leg.



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***Allowable Subject Matter***

14. Claims 34 and 37 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

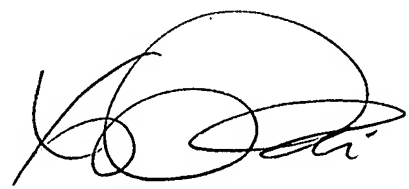
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex P. Rada whose telephone number is 571-272-4452. The examiner can normally be reached on Monday - Friday, 08:00-16:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on 571-272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
APR

  
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TC3700